The Biology and Chemistry of Polyamines; Edited by S.H. Goldemberg and I.D. Algranati; Oxford University Press; Oxford, 1990; xiii + 244 pages; £30.00

This publication is the Proceedings of an Argentine-Japanese Joint Seminar held in Buenos Aires on 9–12 April 1989. According to the Foreword its aim was 'to increase interest in the polyamines in Argentina, and to foster scientific interchange between Argentina and Japan and with the rest of the world'. It contains 24 papers, 4 from Argentina, 7 from Japan and 13 from other countries.

The topics covered by the papers are quite wide ranging within the field of polyamine biochemistry, including a number on the biosynthesis of polyamines and inhibition of polyamine uptake and unusual polyamines. The Preface is a useful 3½ page summary written in August 1989. The publishers are to be commended on bringing out the publication swiftly; many of the authors cite 1989 publications.

A noticeable feature of the papers is the divide between participants from countries having access to the latest technology and those from countries having much more limited facilities. So, on one hand there are papers on the expression of ornithine decarboxylase (Janne et al., Holtta and Sistonen), primary structure of spermidine synthase (Eloranta et al.), feedback regulation of polyamine synthesis (Persson et al.) and ornithine decarboxylase antizyme (Matsufuji et al.) in which the newer methods of molecular biology are employed, whilst others are limited to measuring polyamine levels and assaying for ornithine decarboxylase activity.

The majority of the work is on mammalian tissue, but there are five papers on microorganisms and two on plants. The work of Oshima et al. on extreme thermophiles has uncovered a large number of unusual polyamines, homologues of the three naturally occurring polyamines, and these are able to induce interchange between the B and Z conformations of DNA. There are four papers concerned with inhibitors of polyamine biosynthesis, none of which appear to be more effective than difluoromethylornithine.

The price of the book is reasonable for a specialised monograph, and it is generally well produced, although I do feel that it is a bit of a luxury to give full titles of references when the papers are short. In this particular book 37 pages are devoted to references and 15 are blank pages – over 20% of the book. Twenty-four papers cannot of course cover the range of polyamine biochemistry comprehensively, but the book does provide an up-to-date picture of the topics covered and will undoubtedly be useful to workers in the field.

Lewis Stevens

Microbiology of Extreme Environments and its Potentials for Biotechnology (FEMS Symposium 49); Edited by M.S. da Costa, J.C. Duarte and R.A.D. Williams; Elsevier Applied Science Publishers; Amsterdam, 1989; 429 pages; £56.00 (ISBN: 1-85166-361-4)

This book records the contributions to a FEMS symposium held in Troia, Portugal, in September 1988. In the preface, the editors state that the aim of the Symposium was 'to bring together those interested in (these) microorganisms that grow in extreme environments, from all points of view.' Considering the wide range of topics and contributions, this aim can be said to have been achieved.

The volume is divided into two sections. The first contains 35 invited oral contributions and the second has 43 abstracts of posters. Although none of the contributions are numbered, the first section can be divided into 'topic areas' as follows:

Thermophiles and thermophilism, 8; Archaebacteria, 8; Methanogens, 5; Halophiles (both archaebacterial and eubacterial), 9; General and indeterminate, 4.

Whilst the editors are to be commended for the timeliness of this volume, this reviewer would have welcomed a somewhat firmer editorial rein. The contributions exhibit very wide disparity in length and detail, as well as in their scope and depth.

The title of the symposium is of course quite mouth-watering in the present entrepreneurial climate, of linking 'ivory tower' basic science to the market place. But is it sensible to make it quite so wide? It would be, if the relevance to potential biotechnological issues were always made clear. But that is unfortunately not the case. In fact, of the 35 contributions to the first section, some 15 could be said to have direct relevance to biotechnology, whilst in 6 I cannot see any. The remaining 14 fall somewhere inbetween.

The first article by L.A. Aguilar is entitled 'Laboratory without Walls' and gives a brief account (with examples) of transnational collaboration between laboratories under the aegis of CEC-funded programmes. Consensus between scientists, industrial researchers and funding organizers was that knowledge of 'extremophiles' is still superficial, and needs increased research into extreme environments and organisms. The establishment of further 'European Laboratories without Walls', and exploratory research ventures was called for, and the article contains useful information to facilitate such initiatives.

Of the other 34 contributions, some give 'state of the art' type of overviews of a whole field. Fields dealt with in this way concern: Clostridial homoacetogens; thermophilic bacteria as source of thermostable extracellular enzymes; hydrogenases from methanogens; two, on different aspects of halophilic organisms and their biotechnological potential; one, simply titled Alkaliphiles, is (I think) a paradigm of what one would expect from this kind of symposium; one very wide-ranging contribution on 'Methanogenesis in artificially